**Honors Algebra II/Trig**
*Unit 8: Inverses Day 2 Worksheet*

Name: Key

Find the exact value for the following:

1. $\cos^{-1}\frac{\sqrt{2}}{2}$ $\frac{\pi}{4}$

2. $\cot^{-1}1$ $\frac{\pi}{4}$

3. $\arcsin(-1)$ $\frac{-\pi}{2}$

4. $\cos^{-1}1$ $0\pi$

5. $\operatorname{arccot}-1$ $\frac{3\pi}{4}$

6. $\sin^{-1}1$ $\frac{\pi}{2}$

7. $\csc^{-1}(\sqrt{2})$ $\frac{\pi}{4}$

8. $\operatorname{arcsec}(2)$ $\frac{\pi}{3}$

9. $\sec^{-1}\frac{1}{2}$ undefined

10. $\sin^{-1}(2)$ undefined

11. $\sin^{-1}\left(\frac{1}{2}\right)$ $\frac{\pi}{6}$

12. $\tan^{-1}\sqrt{3}$ $\frac{\pi}{3}$

13. $\cos^{-1}(1)$ $0\pi$

14. $\csc^{-1}(-1)$ $\frac{-\pi}{2}$

15. $\tan^{-1}(-\sqrt{3})$ $\frac{-\pi}{3}$

16. $\csc^{-1}\left(-\frac{2}{\sqrt{3}}\right)$ $\frac{-\pi}{3}$

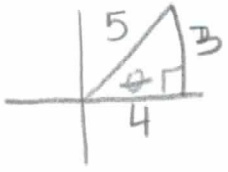
17. $\sec^{-1}(-1)$ $\pi$

18. $\operatorname{arcsec}\left(\frac{2\sqrt{3}}{3}\right)$ $\frac{\pi}{6}$

19. $\sec^{-1}\frac{1}{2}$ undefined

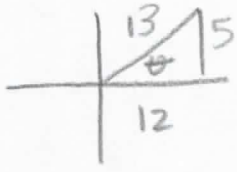
20. $\sin^{-1}(0)$ $0\pi$

21. $\tan\left(\cos^{-1}\frac{4}{5}\right)$



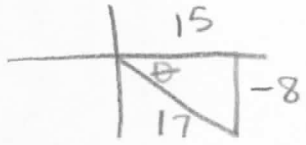

$\frac{3}{4}$

22. $\sin\left(\tan^{-1}\frac{5}{12}\right)$



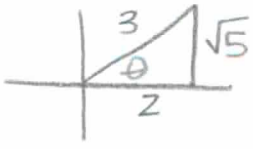

$\frac{5}{13}$

23. $\cos\left(\arcsin-\frac{8}{17}\right)$




$\frac{15}{17}$

24. $\sec\left(\cos^{-1}\frac{2}{3}\right)$



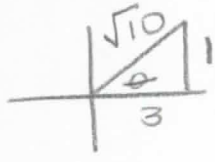

$\frac{3}{2}$

25. $\cot\left(\sin^{-1}\left(-\frac{\sqrt{2}}{2}\right)\right)$

$\cot\left(\frac{-\pi}{4}\right)$

$-1$

26. $\csc(\operatorname{arccot}3)$




$\sqrt{10}$